

## Amendments to the Claims

1. (Canceled).

2-7 (Canceled)

8. (Previously Presented) The polymeric network macromer according to claim 7-18 modified with a therapeutic agent.

9. (Currently amended) The polymeric network macromer according to claim 8 wherein said therapeutic agent comprises ~~comprising~~ a biocompatible organic group selected from the group consisting of peptides, proteins, proteoglycans, glycoproteins, and carbohydrates.

10-11. (Canceled)

12. (Currently amended) The polymeric network macromer according to claim 41-9 wherein said therapeutic agent comprises ~~a~~ the peptide is selected from the group consisting of RGD, YIGSR, REDV, IKVAV, and KRSR peptides.

13. (Currently amended) The polymeric network macromer according to claim 41-9 wherein the protein is selected from the group consisting of members of the transforming growth factor beta superfamily, bone morphogenic proteins, basic fibroblast growth factor, platelet derived growth factor, insulin like growth factor, osteopontin, osteonectin, osteocalcin, bone sialoprotein and other extracellular matrix molecules including osteopontin, osteonectin, osteocalcin, and bone sialoprotein.

14. (Currently amended) The polymeric network macromer according to claim 41-9 wherein the peptides comprise fragments of the proteins selected from the group consisting of members of the transforming growth factor beta superfamily, bone morphogenic proteins, basic fibroblast growth factor, platelet derived growth factor, insulin like growth factor, osteopontin, osteonectin, osteocalcin, bone sialoprotein, and other extracellular matrix molecules including osteopontin, osteonectin, osteocalcin, and bone sialoprotein, comprising 3-30 amino acids.

15. (Currently amended) The polymeric network macromer according to claim 11-9 wherein the carbohydrate is selected from the group consisting of starch, cellulose, and chitin.

16-17. (Canceled).

18. (Currently amended) A polymeric network comprising oligo(poly(ethylene glycol) fumarate) wherein the network comprises ~~The polymeric network according to claim 16 comprising oligo(poly(ethylene glycol)) cross-linked with oligo(poly(ethylene glycol) fumarate).~~

19-20. (Canceled).

21-22. (Canceled).

23. (Currently amended) The polymeric network according to claim 16-18 wherein said polymeric network is water-swellable.

24. (Canceled).

25. (Canceled).

26-29. (Canceled)

30. (Previously Presented) A method of making an oligo(poly(ethylene glycol) fumarate) (OPF) coupled to a therapeutic agent, comprising:

- (a) providing an OPF;
- (b) activating the OPF by dissolving dried OPF and a corresponding amount of 4-nitrophenylchloroformate in triethyl amine; and
- (c) coupling the therapeutic agent to the activated OPF.

31. (Canceled)

32. (Currently amended) The method according to claim 29–30 wherein the therapeutic agent comprises a biocompatible organic group is selected from the group consisting of peptides, proteins, proteoglycans, glycoproteins, and carbohydrates.

33. (Currently amended) The method according to claim 29–30 further comprising:  
(d) cross-linking the OPF with an unsaturated linker molecule.

34. (Canceled)

35. (New) A method of making an oligo(poly(ethylene glycol) fumarate) (OPF) coupled to a therapeutic agent, comprising:

- (a) providing an OPF;
- (b) activating the OPF by reacting a molar excess of fumaryl chloride over PEG; and
- (c) coupling the therapeutic agent to the activated OPF.

36. (New) A method of making an oligo(poly(ethylene glycol) fumarate) (OPF) coupled to a therapeutic agent, comprising:

- (a) providing an OPF;
- (b) activating the OPF by succinylation of end hydroxyl groups of OPF with succinic anhydride; and
- (c) coupling the therapeutic agent to the activated OPF.